

### Electronic Supplementary Information

Figure S1. Distribution diagrams of the complexes formed as a function of pH in the system Co(II)-L1. a)  $[\text{Co(II)}] = [\text{L1}] = 1 \times 10^{-3} \text{ M}$ ; b)  $[\text{L1}] = 1 \times 10^{-3} \text{ M}$ ,  $[\text{Co(II)}] = 2[\text{L1}]$ .

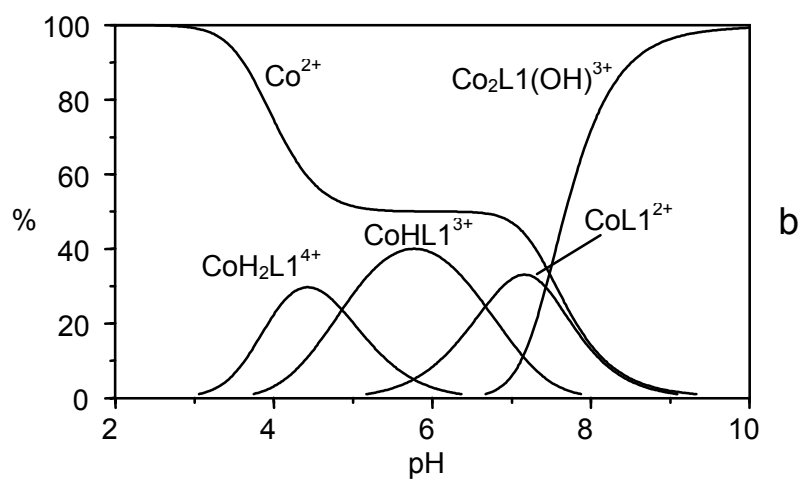
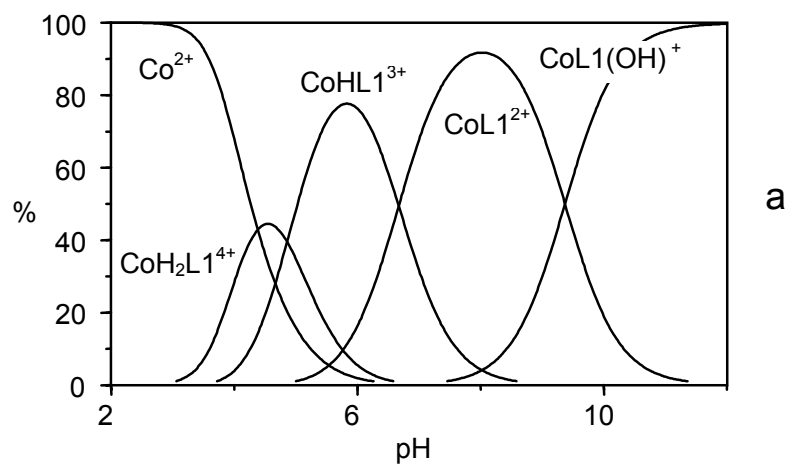


Figure S2. Distribution diagrams of the complexes formed as a function of pH in the system Co(II)-L2.  $[\text{Co(II)}] = [\text{L1}] = 1 \times 10^{-3} \text{ M}$ .

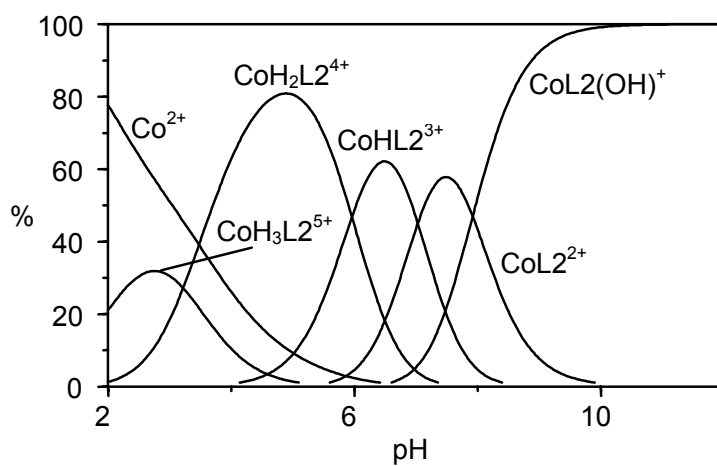


Figure S3.  $^1\text{H-NMR}$  spectra of a) free ligand L1 and b)  $[\text{CdL1}]^{2+}$  complex in  $\text{DMSO-}d_6$ .

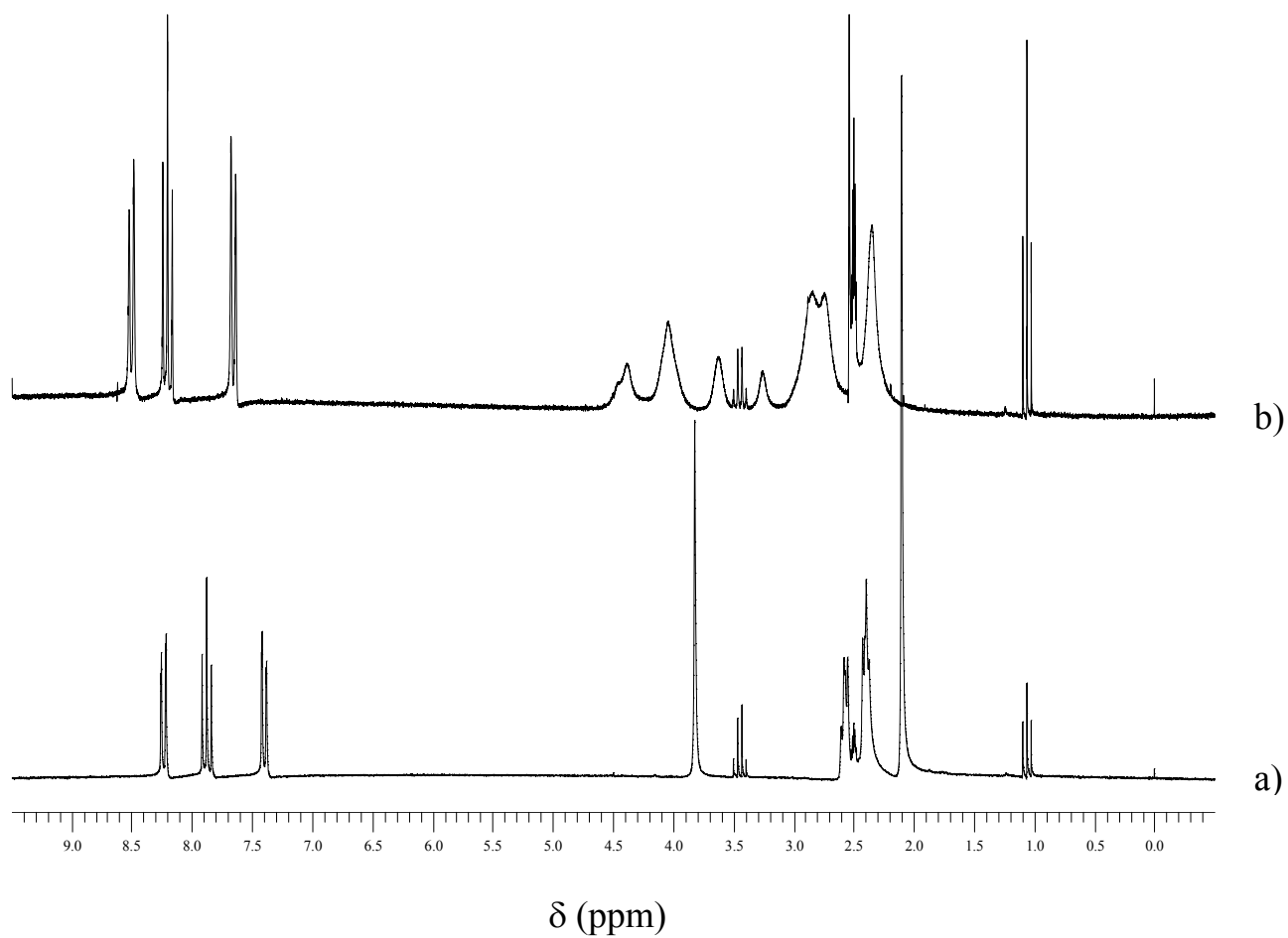


Figure S4.  $^1\text{H-NMR}$  spectra of a) free ligand L2 and b)  $[\text{CdL2}]^{2+}$  complex in  $\text{DMSO-}d_6$ .

